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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/060,049	01/28/2002	Kenneth L. Levy	P0569	6575

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DIGIMARC CORPORATION
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EXAMINER

RAMAN, USHA

ART UNIT PAPER NUMBER

2623

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/060,049

Applicant(s)

LEVY ET AL.

Examiner

Usha Raman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12-11-06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Miscellaneous

1. Please note that the examiner of record for this application has changed.

Response to Arguments

2. Applicant's arguments filed December 11th, 2006 have been fully considered but they are not persuasive.

Applicant's arguments stating that since Kunkel discloses "an out of band insertion of the ID tag, in a preferred embodiment....that it teaches away from detecting the ID tag at the head end". The examiner respectfully disagrees. While Kunkel teaches a preferred embodiment the ID tags are inserted in the VBI, Kunkel further teaches said preferred "out of band" insertion is in addition to the ID tag present in the video (see column 6, lines 15-22, "the ID tags are obviously *present in the video signals* (therefore in band) being received by the cable headend 14", see column 5, lines 38-43, "for MPEG II format....ID tag maybe periodically inserted in a data stream associated with the particular video and audio data stream"), and also discloses that the ID tags can be detected at the headend 14 itself. While Kunkel discloses using the ID tags for inserting ID tags for providing additional content related information, Moskowitz provides a more specific application using the content related information. As a result, the rejection is maintained.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kunkel et al. (US Pat No 5,961,603) in view of Moskowitz et al. (US Pat. 5,822,432).

In regard to claim 20, Kunkel discloses a system and method for accessing Internet-based and other information through a user television in a television distribution network enables a user to access and view information which is related to the programming content of a currently viewed television broadcast, where each television broadcast to be linked to the Internet-based or other information is transmitted by the original broadcaster with an identification tag which identifies the Universal Resource Locator (URL) or address where the program content related information is located (Abstract).

The claimed limitation of "a cable head end to receive the content, the content including an embedded" identifier is met by Figure 1 Item 14. "The network headend 14 receives video programming to be distributed to the user from a satellite 26 as is conventional. In contrast to conventional television distribution systems, however, the headend 14 can also access information from one or more headend databases 28 (hereinafter referred to as the hyperlink database), and this information may be used to select the Internet or other information which can be downloaded to the set top converter boxes 20 for viewing on the user televisions 24. The information stored in the hyperlink database(s) 28 is reference information which is related in some manner to the programs and advertisements being broadcast through the distribution network 16 to the users. For example, the reference information

preferably includes source, content, timing and duration information regarding each program or advertisement. In addition, a key piece of information will typically be a Uniform Resource Locator (URL) which is used to reference more detailed information associated with the content of the programs and advertisements being broadcast" (Col 4, Lines 40-58).

The claimed limitation of a "detector to extract the identifier from the received content from data represented picture or audio portions of the received content" Figure 2, Items 14 and 52. "the ID tags are obviously *present in the video signals* being received by the cable headend 14.... it will of course be understood that the headend 14 can detect and remove the ID tags itself" (Col 6, Lines 15-22).

The claimed limitation of "a bridge to communicate the extracted identifier to a database, the database including a trigger indexed according to the identifier, said bridge to receive a corresponding trigger identified in the database as corresponding to the identifier" Figure 2, Items 54 and 28. "Each of the uplink centers 38 also preferably communicates with an uplink center database 40 which stores information relating to the programming or advertising content such as the URL or other Web based information to be associated with the programming or advertising content. The URL data in each of the uplink center databases 40 is preferably communicated via the Internet to a master database 42 which is interfaced to the data collection center 34. The master database 42 contains the URL and other reference data for all channel hyperlinks for the various national broadcast and cable TV networks. This information is then retransmitted, again preferably through the Internet, to each

of the network headends 14 where the URL data is stored in the one or more hyperlink databases 28.- Additionally, it should also be noted that although much of the URL data stored in the hyperlink database 28 will be the same as the corresponding data stored in the master database 42, there will be some differences in cases where the URLs or other Web data to be associated with an ID tag, as supplied by the programming source, are to be unique for a particular geographic or demographic location or market. For example, an ID tag for an advertised product may be linked to information pertaining to one supplier of the product in a first market area, and information pertaining to a second supplier in a second market area. The data collection center 34 thus manages the transmission of the URL data from the master database 42 to the hyperlink database 28 in accordance with any geographic or demographic identifiers that may be present in each ID tag. Also, the headend database 28 will likely contain only the information on ID tags for programming and advertising which may likely appear on the broadcast channels received by the headend 14, while the master database 42 will contain all such information" (Col 5, Line 44 - Col 6, Line 9). The URL is the inserted trigger.

The claimed limitation of "an inserter communicating with said bridge to insert the trigger into the received content" is met by Figure 2, Items 14 and 50. "The heart of the headend 14 is a headend server 50 which manages accessing of channel hyperlink information from the ISP 30, hyperlink database(s) 28 and local database 44, storage of pre-cached channel hyperlink information in the cache 31, and reception of program content ID tag information from an ID tag receiving circuit 52.

The headend server 50 includes a processor 54 for carrying out these operations" (Col 6, Lines 37-43).

Kunkel fails to explicitly state that the embedded identifier is a watermark.

Moskowitz teaches the use of digital watermark for content identification (See Col 8, Line 66 - Col 9, Line 28) so as "to allow for secured metering and support of other distribution systems of given media content and relevant information associated with them, including addresses, protocols, billing, pricing or distribution path parameters, among the many things that could constitute a 'watermark.'" (Col 1, Lines 15-20). Consequently, it would have been clearly obvious to one of ordinary skill in the art to modify Kunkel with the use of digital watermark for content identification for the stated advantages.

In regard to claim 21, Kunkel discloses "said inserter communicates with at least a set-top box" (See Col 6, Lines 37-43; Figure 1, Items 14 and 20; Figure 3).

In regard to claim 22, Kunkel discloses "said cable head end communicates the trigger to a network and receives from the network related content" (See Col 5, Lines 7- 25).

In regard to claims 23-25, Kunkel discloses "the related content comprises interactive content", "the related content comprises at least one content item from a group of content items comprising a web page, HTML code, Java applet, audio, visual, graphic, and text" and "said inserter inserts the related content into the received content" (See Col 4, Line 40 - Col 5, Line 6).

In regard to claim 26, the claimed limitation of "a cable head end to receive content", where the content is "embedded with a unique identifier, said cable head end comprising an aggregator in communication with at least one set-top box and with a database, said aggregator communicating the unique identifier once extracted from the content to the database, and communicating related interactive data from the database to the set-top box" is met by Figure 1-3, as discussed for claim 20 (Col 4, Lines 40-58; Col 6, Lines 20-22; Col 5, Line 44 - Col 6, Line 9; Col 6, Lines 37-43). Kunkel fails to explicitly state that the embedded identifier is embedded steganographically. Moskowitz teaches the use of digital watermark (i.e. steganographically embedded information) for content identification (See Col 8, Line 66 - Col 9, Line 28) so as "to allow for secured metering and support of other distribution systems of given media content and relevant information associated with them, including addresses, protocols, billing, pricing or distribution path parameters, among the many things that could constitute a 'watermark.'" (Col 1, Lines 15-20). Moskowitz additionally teaches encoding multimedia data including digital audio, video, image (i.e. in-band data) where there are high levels of distortion present so as to mask the changes caused by the watermark encoding (see column 4, lines 60-67). Consequently, it would have been clearly obvious to one of ordinary skill in the art to modify Kunkel with the use of steganographically embedded information for content identification for the stated advantage.

In regard to claim 27, Kunkel discloses "said aggregator communicates with a plurality of set-top boxes, and wherein said aggregator

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multicasts the related interactive data to the set-top boxes" (See Col 6, Lines 37-43; Figure 1, Items 14 and 20; Figure 3).

In regard to claim 28, see claim 26.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usha Raman whose telephone number is (571) 272-7380. The examiner can normally be reached on Mon-Fri: 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

UR



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PRIMARY PATENT EXAMINER